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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/604,588

07/31/2003

YUI-SHIN FRAN

10382-US-PA

1587

31561

7590

03/23/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

ROY, SIKHA

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,588

Applicant(s)

FRAN ET AL

Examiner

Sikha Roy

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claim 12 is objected to because of the following informalities:

Claim 12 is duplicate of claim 1. Applicant is advised that should claim 1 be found allowable claim 12 will be objected to under 37 CFR 1.75 being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being substantial duplicate of the allowed claim. MPEP 706.03(k).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-11 and 20 -22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 20 recite the limitation "the dielectric substrate" in claim 1. There is no mention of dielectric substrate in claim 1 and hence there is insufficient antecedent basis for this limitation in these claims.

Claims 10,11 and 21,22 are rejected being dependent on claims 9 and 20 respectively.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 and 12 –17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,255,782 to Kuroda et al.

Regarding claims 1 and 12 Kuroda discloses (Fig. 1 column 3 lines 4-20, 52-67, column 4 lines 59-62) a flat fluorescent lamp comprising a gas discharge chamber , a fluorescence substance 3 disposed on the inner wall of the gas discharge chamber, a

discharge gas disposed in the chamber, a plurality of electrodes P1,P2, P7, P8 disposed on the outer wall of the gas discharge chamber.

Regarding claim 2 Kuroda discloses (column 3 lines 4-15) the gas discharge chamber comprises a dielectric substrate 2, a plate 1 disposed on the upper portion of the dielectric substrate, strips (spacers) disposed between the dielectric substrate and the plate (sheet-like front and rear glass substrates), plate connected to the edge of the dielectric substrate.

Referring to claims 3 and 4 Kuroda discloses (column 7 lines 41-46) the thickness of the dielectric substrate is 1.1 mm and the distance between the dielectric substrate and the plate (thickness of the discharge space) is 1.8 mm.

Regarding claims 5 and 6 Kuroda discloses (column 4 lines 59-62) the discharge gas is an inert gas which includes Ne, Ar, Xe.

Regarding claim 13 Kuroda discloses all the limitations of claim 2 and additionally Kuroda discloses (column 3 lines 36-40) a spacer is inserted between the front and rear substrates having a thickness of 0.2 m and width equal to the thickness of the discharge space.

Claims 14,15,16 and 17 essentially recite the same limitations as of claims 3-6 respectively and hence are rejected for the same reasons. (see rejection of claims 3,4,5,6).

Claims 1-6 and 12,13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,762,556 to Winsor.

Regarding claim 1 Winsor discloses (Fig. 1 column 3 lines 31-62 column 6 lines 60-65) a flat lamp comprising a gas discharge chamber having discharge gas inside, fluorescent substance (34 in Fig. 5) disposed on the inner wall of the discharge chamber and plurality of electrodes 22,24 disposed on the outer wall of the chamber.

Regarding claim 2 Winsor discloses (Fig. 1) the discharge chamber comprises a dielectric substrate 14, a plate 16 disposed on the upper portion of the substrate, a plurality of strips 18 (sidewalls) disposed between the dielectric substrate and the plate, plate being connected to the edge of the substrate.

Regarding claim 3 Winsor discloses (column 5 lines 53-56) the thickness of the bottom dielectric substrate is 1mm or less.

Regarding claim 4 Winsor discloses (column 6 lines 5-10) the distance between the dielectric substrate and the plate (height of the sidewall) is .51 mm.

Regarding claims 5 and 6 Winsor discloses (column 3 lines 38-42) the discharge gas is inert gas including one of Xe, Ar.

Regarding claim 13 Winsor discloses all the limitations which are same as of claim 2 and also spacers 20 distributed between the plates 14 and 16 to support the plates and thereby minimizing the danger of implosion due to external atmospheric pressure. (Fig. 1 column 3 lines 52-57).

Claims 14,15,16 and 17 essentially recite the same limitations as of claims 3-6 respectively and hence are rejected for the same reasons. (see rejection of claims 3,4,5,6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7,8 and 18,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,255,782 to Kuroda et al., and further in view of U.S. Patent 6,034,470 to Vollkommer et al.

Regarding claim 7 Kuroda discloses electrodes made of conductive film such as ITO. Kuroda does not exemplify the electrodes being metal electrodes.

Vollkommer in analogous art of flat fluorescent lamp discloses (column 6 lines 15-18) the electrodes consisting of a metal such as silver. Vollkommer further discloses electrodes made of silver with high current carrying capacity can be constructed as a relatively narrow strip and formation of cracks can be avoided.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use electrodes of the lamp of Kuroda made of metal as suggested by Vollkommer for providing strip electrodes with high current carrying capacity without formation of cracks.

Regarding claim 8 Vollkommer discloses (column 11 lines 53-56) electrodes made of silver.

Claims 18 and 19 essentially recite the same limitations as of claims 7 and 8 and hence are rejected for the same reason.

Claims 9-11 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,255,782 to Kuroda et al., and further in view of U.S. Patent 5,319,282 to Winsor ('282).

Regarding claim 9 Kuroda is silent about a carrier substrate disposed beneath the dielectric substrate to carry the gas discharge chamber.

Winsor ('282) in the same field of endeavor discloses (Fig. 5 column 9 lines 54-60, column 10 lines 1-42) a flat lamp having a carrier substrate (planar substrate) 68 disposed on the plate 65 of the lamp creating a second chamber. The pressure in the second chamber being intermediate between the atmospheric pressure and the low pressure inside the discharge chamber places less stress on the planar plate 65 of the lamp. Winsor('282) further discloses this configuration permits thinner plates to be used in the lamp 10 without danger of imploding and thus enhancing intensity of light emitted from the lamp.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to provide a carrier substrate disposed on the dielectric substrate of the flat lamp of Kuroda as taught by Winsor('282) creating a second chamber which results in less stress on the dielectric substrate of the lamp and thus permitting use of thinner plate without danger of imploding.

Regarding the recitation of 'carrier substrate disposed beneath the dielectric substrate' the examiner notes that 'beneath' is a relative term and if light is emitting from

the top plate of the flat lamp of Kuroda, then the carrier substrate disposed on the dielectric substrate can be interpreted as disposed beneath the bottom dielectric substrate.

Regarding claim 10 Winsor('282) discloses (column 13 lines 19-31 Fig. 5) the carrier substrate and the dielectric substrate are connected (bonded) by disposing adhesive on the side walls 70 and 72.

Regarding claim 11 Winsor('282) discloses adhesive includes glasses, UV epoxy resins or other suitable adhesive for permanently bonding the glass structures.

Claims 20-22 essentially recite the same limitations as of claims 9-11 and hence are rejected for the same reasons. (see rejection of claims 9-11).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 4,851,734 to Hamai et al. and U.S. Patent 5,592,047 to Park et al. disclose flat discharge lamp with electrodes disposed on the outside surface.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

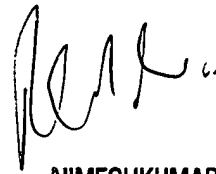
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S.R.

Sikha Roy
Patent Examiner
Art Unit 2879



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800